Remarks/Arguments

Claims 12, 13 and 15 to 31 are pending. Claims 12 and 19 have been amended. New Claims 27 to 31 have been added.

Claim 19 has been objected to for dependence on a rejected claims, but would be allowable if rewritten in independent form including all limitations of intervening claims. Applicants thank the Examiner for indicating the allowability of the subject matter of Claim 19. However, applicants note that they believe that all of the claims are allowable.

Claim 19 has been put into independent form so it should now be allowable.

This objection should be withdrawn.

New Claims 27 to 31 correspond to Claims 13 and 15 to 18, and are dependent upon independent Claim 19, so they should also be allowable.

The Office Action stated that the rejection under Section 112, second paragraph, has been withdrawn since it is clear that the compound in Claim 12 can be pasty or a solid.

The Office Action stated that the rejections under Section 103 are withdrawn since the references fail to motivate those of ordinary skill to modify their disclosures to include compounds with hydroxycitrate.

The Office Action stated that the following is a quotation of 35 U.S.C. 103(a) which forms the basis for the obviousness rejections set forth in this Office Action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in Section 102 of this title, if the difference between the subject matter sought to be patented and the prior art are such that the subjection matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which

said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 12, 13, 15 to 18 and 20 to 26 have been rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,217,898 (Cavazza). Applicants traverse this rejection.

Cavazza only discloses a composition having two separate compounds, namely, alkanoyl L-carnitine (or L-carnitine) and hydroxycitric acid (or pantethenic acid) or derivatives thereof. Cavazza et al. does not disclose a compound, or salt, that is a reaction production of the two separate compounds disclosed by Cavazza.

Applicants' claim invention is drawn to a compound salt of carnitine, magnesium and hydroxycitric acid. Cavazza does not teach or suggest applicants' claimed carnitine-magnesium hydroxycitrate or the unexpected advantages thereof.

It is clear from Cavazza itself that it only discloses a composition having two separate compounds as Cavazza states:

> "The present invention relates to a novel therapeutic use of L-carnitine, some alkanoyl L-carnitines and the pharmacologically acceptable salts thereof in combination with hydroxycitric or pantethenic acid or derivatives thereof...." [Emphasis supplied] [Col. 1, lines 10 to 13]
>
> "According to its broadest aspect the invention relates to the co-ordinated use of L-carnitine or an alkanoyl L-carnitine or the pharmacologically acceptable salts thereof with hydroxycitric or pantethenic acid or derivatives thereof. By 'co-ordinated use' of the aforesaid compounds it is meant indifferently either the co-administration, i.e. the substantially concomitant supplementation of L-carnitine or alkanoyl L-carnitine or a pharmacologically acceptable salt thereof and hydroxycitric or pantethenic

acid or a derivative thereof, as active ingredients, or the administration of a combination preparation comprising a mixture of the aforesaid active ingredients, in addition to suitable excipients, if any." [Emphasis supplied] [Col. 1, lines 20 to 32]

"The present invention also relates to orally, parenterally, rectally or transdermally administrable pharmaceutical compositions suitable for treating the aforesaid disorders and for controlling and decreasing the appetite, which comprise, as active ingredients, L-carnitine or an alkanoyl L-carnitine or a pharmacologically acceptable salt thereof and hydroxycitric acid or pantethenic acid or derivative thereof. Preferred hydroxycitric acid derivatives are the salts and esters thereof and the natural products and their extracts containing same, as specified in more detail hereinbelow. [Emphasis supplied] [Col. 1, lines 33 to 42]

"A method for reducing cholesterol in hypercholesterolaemia, comprising administering to a subject in need thereof an effective amount of a composition, wherein said composition comprises:

(i) a first component selected from the group consisting of propionyl L-carnitine, and pharmaceutically acceptable salts of propionyl L-carnitine; and

(ii) a second component selected from the group consisting of hydroxycitric, acid, salts of hydroxycitric acid, and esters of hydroxycitric acid,

wherein said composition comprises said second component and said first component in a weight ratio of from 1:1 to 1:2" [Emphasis supplied] [Claim 1]

"What have proved very surprising and unexpected, however, are the synergistic effects which can be obtained on energy metabolism and on lipids metabolism by combining these two compounds or by co-ordinately administering them."

"This unexpected synergistic effect obtained by the co-ordinated use of L-carnitine or its derivatives and hydroxycitric or pantethenic acid or derivatives thereof has been demonstrated in numerous studies, so much so, indeed, as to suggest that this combination can be used to advantage in facilitating the elimination of lipids and cholesterol from issues, in the treatment of cardiovascular diseases, and in preventing abnormal formation and accumulation of fats." [Emphasis supplied] [Col. 3, lines 7 to 19]

"A pharmaceutical compositions comprising L-carnitine or alkanoyl L-carnitine and hydroxycitric or pantethenic acid or derivations thereof for the prevention and treatment of diseases brought about by lipid metabolism disorders, is disclosed." [Emphasis supplied] [Abstract]

Cavazza does not disclose a compound, or salt, that is a reaction product of the two separate compounds disclosed by Cavazza.

Since U.S. Patent No. 5,071,847 (issued in 1991) discloses and claims using L-carnitine magnesium citrate as a pharmacological active ingredients, one would think that the Patent Office and/or Cavazza would have cited U.S. Patent No. 5,071,874 in the examination/prosecution of U.S. Patent No. 6,217,898 (Cavazza) if Cavazza disclosed and claimed using, in a method of reducing cholesterol in hypercholesterolaemia, a compound (or salt) that was a reaction product of an alkanoyl-L-carnitine and a hydroxycitric acid salt. However, U.S. Patent 5,071,874 was not cited in Cavazza.

The Office Action of September 14, 1999, in Cavazza (U.S. Patent No. 6,217,898) states:

"...the combination of the claimed compounds." [Page 3]

"Hastings teaches dry formulations containing calcium salt of hydroxy citric acid, L-carnitine salt, chromium, antioxidants and other components for weight loss...." [Page 5]

"In essence, applicant argues that the combination gives unexpected.... As pointed out above, Hastings teaches the combination of L-carnitine and hydroxycitric acid for the same purpose." [Emphasis supplied] [Page 7]

Applicants' claimed invention is drawn to a compound salt of carnitine, magnesium and hydroxycitric acid. Applicants' specification states:

"The present invention further relates to a carnitine-magnesium hydroxycitrate." [Page 1, lines 12 to 14]

"It is the object of the present invention to avoid this and other disadvantages of the prior art." [Page 2, lines 33 and 34]

"The present invention further relates to carnitine-magnesium hydroxycitrate. This is a salt of low hygroscopicity." [Page 12, line 38, to page 13, first line]

The Office Action stated: that Cavazza teaches compounds comprising L-carnitine in combination with hydroxycitrate; and see column 1, lines 10 to 19. Applicants traverse this statement if the Examiner means that Cavazza teaches anything more than a composition having more than a combination of the unreacted, separate compounds L-carnitine and hydroxycitrate.

The Office Action stated that the difference between the compounds covered in the claims and those disclosed by Cavazza is that Cavazza fails to explicitly teach magnesium salts. Applicants traverse this statement as being factually incorrect

regarding the disclosure of Cavazza and the claims in this application. Claim 12 states:

"Carnitine-magnesium hydroxcitrate, a salt compound...." [Emphasis supplied]

Cavazza does not disclose a compound, or salt, that is a reaction product of the two separate, unreacted compounds (in the composition) disclosed by Cavazza. Cavazza only discloses a composition of two separate, unreacted compounds.

Cavazza does not teach or suggest the use of carnitine-magnesium hydroxy citrate.

The Office Action stated: that, however, the patent clearly contemplates salts of hydroxycitrate; and see column 1, line 40. Applicants traverse this statement as being clearly incorrect. Cavazza only is referring to salts and esters of the compound hydroxycitric acid derivative, which is a separate compound that is not reacted with the L-carnitine.

Furthermore, the U.S. patent Cavazza does not contemplate anything as it is an inanimate object.

Webster's Ninth New Collegiate Dictionary, (1989) states:

"**con·tem·plate** \'känt-əm-,plat, 'kan-,tem-\ vb **–plat-ed, -plat·ing** [L *contemplatus*. pp. of *contemplari*, fr. com- + *templum* space marked out for observation of auguries – more at TEMPLE] vii (1592) : PONDER. MEDIATE ~ vt 1: to view or consider with continued attention : meditate on 2 : to have in view as contingent or probable or as an end or intention. ***syn*** see CONSIDER – **con·tem·plat·or** \·plät·ər \n"

"**con·tem·pla·tion** \, känt-əm-'plā-shən, ,kan-,tem-\ n (13c) 1 a : concentration on spiritual things as a form of private devotion b : a state of

mystical awareness of God's being 2 : an act of considering with attention : STUDY 3 : the act of regarding steadily 4 : INTENTION, EXPECTATION"

[Page 283]

The Office Action stated: that, moreover, the patent also contemplates hydroxycitric acid from natural sources; and see column 1, lines 51 to 59, which is highly suggestive of magnesium salts. Applicants traverse this statement as being mere forbidden hindsight based only on applicants' disclosure. Furthermore, lines 51 to 59 of column 1 of Cavazza is merely recitation of prior art so it is not part of the Cavazza invention – in fact such prior art is what Cavazza directs away from and what Cavazza's invention overcomes along with the disadvantages of such prior art. Nowhere in column 1, lines 51 to 59, is a salt or a metal mentioned – in fact, it recites "hydroxycitric acid" [Emphasis supplied], which of course is not a salt. Silence on Cavazza does not justify speculation or hindsight by the Examiner as Section 103(a) requires facts. Column 1, lines 51 to 59, of Cavazza certainly is not suggestive of magnesium salts or any other salt.

Again, please note that Cavazza does not contemplate anything.

Cavazza does not teach or suggest a salt of hydroxycitric acid that is a magnesium salt of hydroxycitric acid.

Even if the disclosure of Cavazza of the invention described therein suggested magnesium salts to one ordinarily skilled in the art (or even one skilled in the art), the result would not result in or suggest applicants' claimed invention to one ordinarily skilled in the art. The reason, among others, is that Cavazza still only discloses, a composition of two separate, unreacted compounds (one a salt), whereas applicants' claimed invention is a single compound, namely, carnitine-magnesium hydroxycitrate.

Following the dictates of the Graham decision is mandatory of the Examiner as such is Patent Office policy and the named decision is of the Supreme Court, M.P.E.P. 2141, (Rev. 3, August 2005), states:

> "Office policy is to follow *Graham v. John Deere Co.* in the consideration and determination of obviousness under 35 U.S.C. 103. As quoted above, the four factual inquiries enunciated therein as a background for determining obviousness are as follows:
>
> (A) Determining the scope and contents of the prior art;
>
> (B) Ascertaining the differences between the prior art and the claims in issue;
>
> (C) Resolving the level of ordinary skill in the pertinent art; and
>
> (D) Evaluating evidence of secondary considerations." [Emphasis Supplied]

M.P.E.P. 2141.03, (Rev. 3, August 2005), states:

"ASCERTAINING LEVEL OF ORDINARY SKILL IS NECESSARY TO MAINTAIN OBJECTIVITY"

> "'The importance of resolving the level of ordinary skill in the art lies in the necessity of maintaining objectivity in the obviousness inquiry,' *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718, 21 USPQ2d 1043, 1057 (Fed. Cir. 1991). The examiner must ascertain what would have been obvious to one of ordinary skill in the art at the time the invention was made, and not to the inventor, a judge, a layman, those skilled in remote arts, or to geniuses in the art at hand. *Environmental Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 218 USPQ 865 (Fed. Cir. 1983), *cert. denied*, 464 U.S. 1043 (1984)." [Emphasis Supplied]

"M.P.E.P. 2144.08.II, (Rev. 3, August 2005), states:

"A proper obviousness analysis involves a three-step process. First, Office personnel should establish a *prima facie* case of unpatentability considering the factors set out by the Supreme Court in *Graham v. John Deere*. See, e.g., *In re Bell*. 991 F.2d 781, 783, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993) (The PTO bears the burden of establishing a case of *prima facie* obviousness.'); *In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993); *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Graham v. John Deere Co., 383 U.S. 1, 17-18 (1966), requires that to make out a case of obviousness, one must:

(A) determine the scope and contents of the prior art;

(B) ascertain the differences between the prior art and the claims in issue;

(C) determine the level of skill in the pertinent art; and

(D) evaluate any evidence of secondary considerations. If a *prima facie* case is established, the burden shifts to applicant to come forward with rebuttal evidence or argument to overcome the *prima facie* case." [Emphasis Supplied]

The Examiner has not factually determined the level of ordinary skill in the art, so the Examiner knows nothing about one ordinarily skilled in the art or what would motivate such a person in the search for applicants' claimed invention.

The Office Action stated that, therefore, magnesium salts of hydroxycitric acid are well within the motivation of those of ordinary skill, based on Cavazza, and therefore, are prima facie obvious. Applicants traverse this statement for a multitude of reasons. This Section 103(a) rejection is fatally defective. There has been no

factual determination, as required by the Graham decision and Office policy, in the record of the level of ordinary skill in the art. Without this required factual determination, this obviousness rejection fails on its face. Accordingly, there is no prima facie showing of obviousness in the record.

The "motivation of those of ordinary skill" is totally outside of the knowledge of the Examiner as the Examiner does not know anything about one ordinarily skilled in the art.

The Examiner also has not factually established in the record such so-called "motivation". Mere stating or asserting that such so-called "motivation" exists does not factually establish that the necessary motivation exists (or what it is).

Section 2143.01.I. of the M.P.E.P., (Rev. 4, 2005), states:

> "Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art." [Emphasis Supplied] [Page 2100-130]

The Examiner has not factually determined the level of ordinary skill in the art, so the Examiner cannot correctly any assertion concerning or involving one ordinarily skilled in the art. Nor has the Examiner factually shown in the record the so-called motivation of which the Examiner spoke.

There is no mention in Cavazza by hygroscopic, hygroscopicity or the like. Applicants' claimed complex salt compound unexpectedly has substantially reduced hygroscopicity compared with the complex salt compound L-carnitine-magnesium citrate having low hygroscopicity of U.S. Patent No. 5,071,874. This unexpected advantage shows unobviousness over even previously know L-carnitine-magnesium

citrate, and especially over the speculation of the speculation of the Examiner regarding the disclosure of Cavazza that does not even mention hygroscopicity. Cavazza does not teach or suggest the problem identified by and solved by applicants' claimed compound.

Applicants' specification states:

"EP 402 755 (U.S. Patent 5,071,874) describes the stoichiometric complex salt L-carnitine-magnesium citrate which is distinctly less hygroscopic than free caritine and is thus stable on storage. At a relative humidity of 56%, the water uptake by the complex salt after storage for 1 week is 21% by weight. The complex salt is prepared by mixing the components in aqueous solution at 60°C. The solid is then obtained by spray drying or crystallization. The residual hygroscopicity of the carnitine-magnesium citrate prepared in this way still proves to be a certain problem during storage and further processing. A further reduction is desirable." [Emphasis Supplied] [Page 2, lines 7 to 18]

This problem of the prior art is not recognized by Cavazza or the Examiner. Applicants' claimed solution to this problem is also not recognized by Cavazza or the Examiner.

Applicants' specification states:

"A composition which can be granulated and has been prepared by the method of the invention is surprisingly distinguished by a particularly low hygroscopicity compared with the starting substance, for example pure carnitine." [Page 4, lines 30 to 34]

"Compared with previous methods of preparation, the hygroscopicity of the complex salt L-carnitnie-magnesium citrate prepared in this way is reduced

further. For example, the moisture uptake, determined by gravimetry in the way familiar to the skilled worker, of solid carnitine-Mg citrate prepared by the method of the invention and previously dried to constant weight under oil-pump vacuum or over phosphorus pentoxide is not more than 7% by weight after 48 h at 56% relative humidity (rH). This figure is not exceeded even after storage for 330 h. Based on the amount of carnitine or carnitine derivative present in the mixture, referred to within the scope of the invention as carnitine content based on free base, this corresponds to a moisture uptake of not more than 40% by weight. It is preferred or at least 80% of the carnitine-Mg citrate, based on the carnitine content in the mixture, to be in the form of complex salt in the mixture of the invention." [Emphasis Supplied] [Page 6, line 35, to page 7, line 15]

Applicants' comparative data (set out in this application and the previously submitted declaration of joint applicant Martin Fuhrmann) shows the error of this Section 103(a) rejection and the unobviousness of applicants' claimed invention.

This rejection should be withdrawn.

Reconsideration, reexamination and allowance of the claims are requested.

Respectfully submitted,

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I hereby certify that this correspondence of is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on October 6, 2006.

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